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Field of invention

This invention generally relates to objects hung on a surface, such as pictures, mirrors, plaques, etc.

This application is an improvement to patent number 5,947,438. Figure #1 in patent number 5,947,438 shows adjustable hooks 14 AA and 14BA with cord 116 hanging down and hook 118 fastened to the end of it. The improvements cited in this application deal with the number and configurations of the hooks and cords shown in that drawing. Some may consider the improvements to be obvious; however, this application is considered to provide significant new matter that is not covered by that patent.

It is the object of the present invention to provide useful means for hanging objects with adjustable cord loops for positioning and locking objects onto a surface.

1 The first item is the use of a cord loop formed by extending the cord from
2 one side of the hanger to the other. By having an adjustable loop the
3 hanger can then interface with a number of different brackets for
4 supporting an object. An “S” type hook can be used on the cord loop, or a
5 bracket can be affixed to the object so that the bracket or hook from the
6 object hangs on the loop from the hanger. The head of one or more
7 protruding screws can also be used to support the object. Furthermore, the
8 bracket can interface with the body of the hanger so that the object is
9 locked onto the hanger.

11 The second item is the use of two cords forming a top and a bottom loop
12 with a common adjusting hook in the hanger body. With this arrangement
13 the object can be locked onto the surface when the loops are tightened
14 against a double wall bracket or top and bottom hooks on the object when
15 the hanger is affixed to the wall.

17 The third item is the use of two cords forming top and bottom loops with
18 top and bottom adjusting hooks in the hanger body. With this arrangement
19 the object can be positioned vertically to a desired level by the supporting
20 loop and then locked into place by tightening the second loop. When the
21 hanger is affixed to a wall the lower loop is the support loop and the top

1 loop provides a range of top tilting until the loop is drawn tight and the
2 object becomes locked onto the hanger.
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8 **Brief Description of Drawings**

9 FIG. 1 is a back elevational view from the wall surface of a single loop
10 hanger with a single adjusting hook fastened to a wall and a double
11 beveled bracket fastened to an object.

12 FIG. 2 is section A-A from FIG 1.

13 FIG. 3 is a front elevational view taken from the back surface of an object
14 with four screw heads interfacing with a double loop hanger having one
15 adjusting hook and fastened to the wall.

16 FIG. 4 is a front elevational view taken from the back surface of an object
17 with four screw heads interfacing with a double loop hanger having two
18 adjusting hooks and fastened to the wall.
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Detailed Description

Firstly, referring to FIG. 1 which is a back elevational view looking away from the wall of hanger 100 assembly 100. The hanger body 101 is affixed to wall surface by screws 102 and 111. The body 101 has apertures 103 and 108 through which screw 104 is going. Screw 104 has hook 119 threadably engaged to it and is secured in position by retainer 109. Cord 107 has knot 106 keeping it secured to the hanger body at aperture 105. The cord extends from aperture 105 to hook 119 then over to aperture 110 and forms a V-shape. The cord exits the hanger body at 110 and extends down to space 118 formed by bracket 115 and continues around to the other side of the hanger body 101 where it enters aperture 113 and has knot 112 securing it to the hanger. Bracket 115 is affixed to an object with screws 116 and 117. Bracket 115 is configured to have beveled areas 114 and 118. Beveled area 118 allows the object to be hung on cord 107 while beveled area 114 engages the hanger body 101.

When an bracket 115 is hung on the cord extending down from the bottom of hanger body 101 it can be raised up by the action of the screw 104 and hook 119 pulling on cord 107 and making the V-shaped section of cord longer. As the bracket 115 moves up the upper beveled area 114 engages the hanger body 101 and effectively locks the object onto the hanger.

1 FIG. 2 is section A-A of FIG.1. It shows hanger body 201 affixed to wall
2 220 with screws 202 and 211. Screw 204 is going through aperture 203.
3 Cord 207 is knotted at 212 and extends down into area 218 formed
4 between bracket 215 and object 219. Bracket 215 is affixed to object 219
5 with screws 216 and 217. Bracket 215 has area 214 engaging hanger body
6 201 in space 214. This drawing shows the object being held and locked
7 onto the hanger assembly 200.

8
9 FIG. 3 shows hanger assembly from the back edge of an object having
10 protruding screws 301, 302, 318 and 325 engaging cord loops 303 and 317
11 extending beyond the top and bottom of hanger body 326. The hanger
12 body 326 is affixed to a surface with screws 304, 307, 315 and 316. The
13 hanger body is made from a U-channel and has apertures 311 and 320
14 through which screw 310 goes. Screw 310 has hook 312 threadably
15 engaged to it and is held in position by retainer 321. Top cord 303 is
16 knotted at 305 and goes through apertures 306, 308, and 323. It forms a
17 top loop between 306 and 308 that goes over screws 301 and 302. Cord
18 303 then enters the body through aperture 308 and goes over hook 312 and
19 then out through aperture 323 where it is knotted at 322. The bottom cord
20 317 forms a loop by being knotted at 314 and going through aperture 313,
21 over screws 318 and 325, then into aperture 324. It then goes over hook
22 312 and exits the body at aperture 309 where it is knotted at 319.

1
2 Turning screw 310 simultaneously changes the length of the top and
3 bottom loops. The top loop supports the object and the bottom loop locks
4 the object onto the hanger.
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6 FIG. 4 shows hanger assembly 400 having top cord 403 going over screws
7 401 and 402 that are protruding from the back of an object. The hanger
8 body 430 is affixed to a surface with screws 407, 411, and 415. The body
9 has two screws and hooks. Top screw 408 goes through apertures 409 and
10 421. It has hook 410 threadably engaged on it and is retained by 422. Cord
11 403 is knotted at 405 and goes through apertures 406, 404, and 423.

12 Between apertures 404 and 423 the cord goes over hook 410 and adjusts
13 the length of the top loop as the screw 408 is turned and hook 410 moves
14 on it. Bottom screw 412 goes through apertures 413 and 428. It is retained
15 by 427 and has hook 414 threadably engaged on it. Bottom cord 418 starts
16 at 416, goes through aperture 417, then over screws 419 and 420 that are
17 protruding from the back of the object, and into aperture 429. From
18 aperture 429 the cord goes over hook 414 and exits hanger body 430 at
19 aperture 426 where it is knotted at 425.
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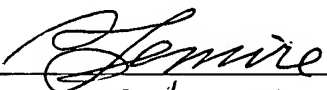
21 Turning screw 412 changes the vertical position of the object by reducing
22 the length of the bottom loop. Turning screw 408 changes the length of the

1 top loop and initially alters the amount of top lean the object has with
2 respect to a vertical surface until the cord is tightened against screws 401
3 and 402. The combined action of the two loops is to provide support,
4 positioning and locking capability.

5
6 While the invention has been illustrated and described in the above
7 specification it is not intended to be limited to the details shown, since it
8 will be understood that various omissions, modifications, substitutions,
9 and changes in the form and details of the devices illustrated can be made
10 by those skilled in the art without departing from the spirit of the present
11 invention. For instance, the hangers can be affixed to the object and the
12 loops engage supports affixed to a surface; the hangers can be affixed to
13 the middle of small objects or one on each side for larger objects; and the
14 cords can also have a number of hooks going over them or on them for
15 holding the object onto the hanger.

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5 **Sponsored R&D**
6

7 The inventor (Robert J. Lemire) has not received any Federal Sponsored funding
8 pertaining to the application being submitted for "Improved Hook & Cord Loop Hanging
9 System".
10

11
12 Signed: 

13
14 Printed Name: Robert J. Lemire

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16 Date: 3/20/04
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